



Oscar Pedersen
Architecture Portfolio



Oscar Pedersen

720 705 1679 | oscarpedersen7@gmail.com

Kansas University | 4th Year M. Arch

- Academic Merit Scholarship
- Study Abroad in Northern Europe | Summer 2025
- KU Architecture Student Portfolio Honorable Mention | Spring 2025

Previous Architecture Experience

ARCADEA Architecture

Boulder, Colorado 5/2024- 8/2024

Position: Summer Intern

While at Arcadea, I worked as lead on a residential entry remodel project. This project involved talking with the client, coordinating Matterport scans, Revit and Sketchup modeling, schematic design, and construction documents. I also helped and learned about material and fixture schedules, updated City of Boulder building codes, and renders.

References

David Biek

Senior Architect
Coburn Partners
303 819 2424

Shannon Criss

Professor of Architecture
University of Kansas
scriss@ku.edu

Skills

Adobe Photoshop
Adobe InDesign
Sketchup
Basic Rhino and Grasshopper
Revit
F9 Productions Revit online course
<https://revitrocketship.teachable.com/p/revitrocketship>
Sketching
Watercolor

01.

Wichita Metalworks Center | Arch 508 |

02.

River Market Library | Arch 209 |

03.

Riverfront Pavilion | Arch 209 |

04.

Homeworks USA Community Area | Arch 509 |

05.

Additional Works | Internship |

06.

Additional Works | Watercolors |

01. Wichita Metalworks Center

Professor- Amy Van De Riet

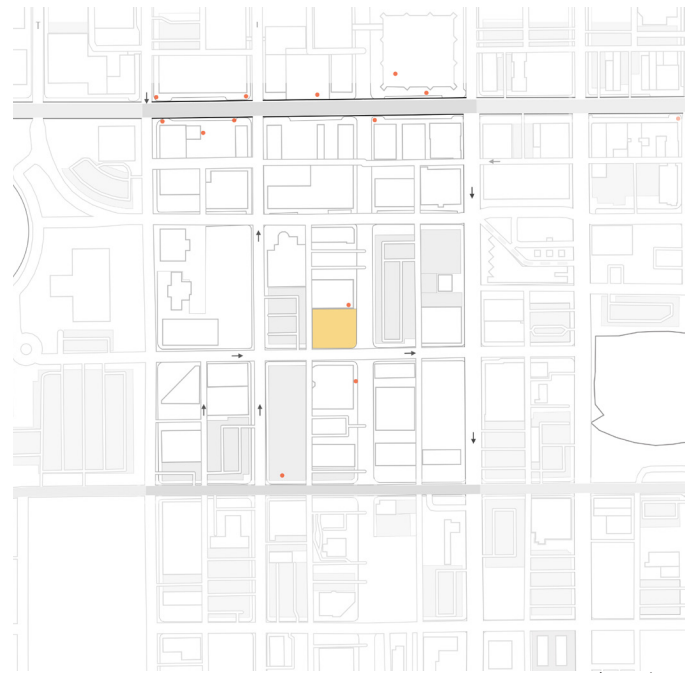
Fall 2024



The Wichita Metalworks Center is a regenerative design project located at a vacant site at the corner of English Avenue and Broadway in Wichita, Kansas.

Inspired by nearby street art, the metalworks center's purpose is to recycle scrap metal into artwork to further enhance downtown Wichita.

The building maintains the urban street corner, while providing a exterior gathering area that compliments the soon to be medical campus East of the site.



Site Map | Wichita



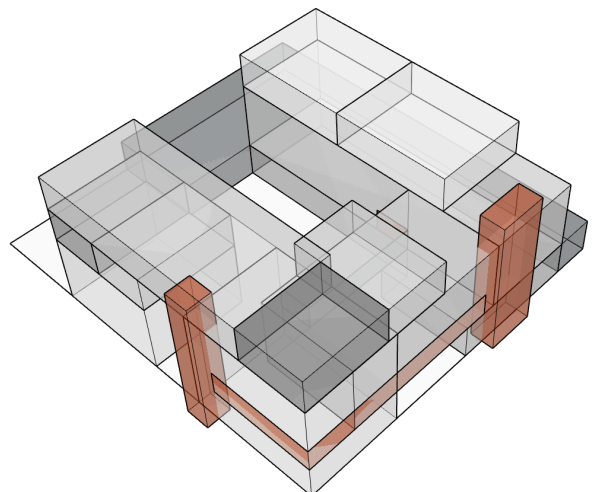
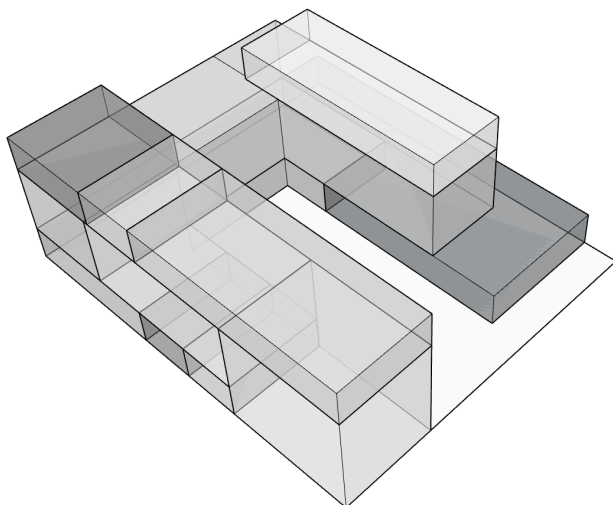
Building Use Inspiration | Georgia Gerber Bronze Sculptures | Downtown Wichita

Initial concepts and massing models explored a variety of different forms and locations for the building on the site.

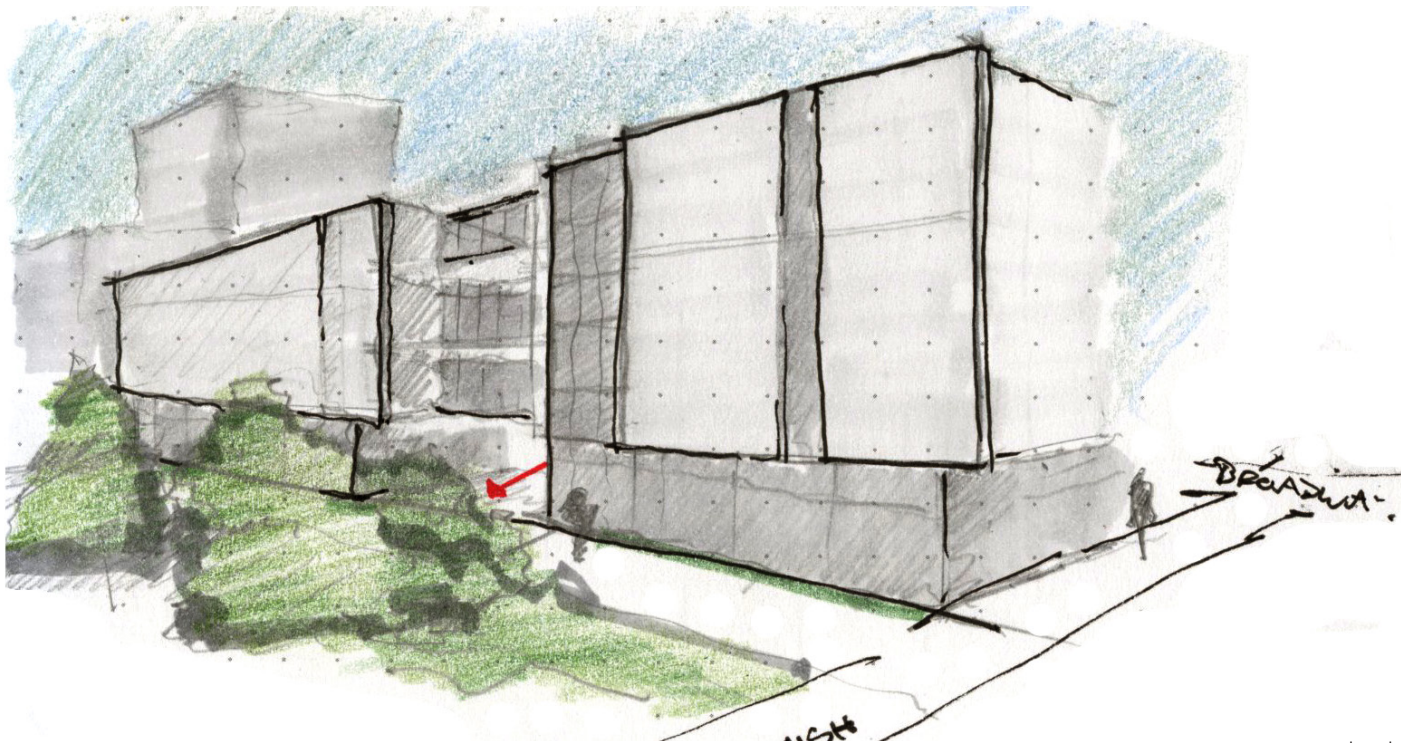
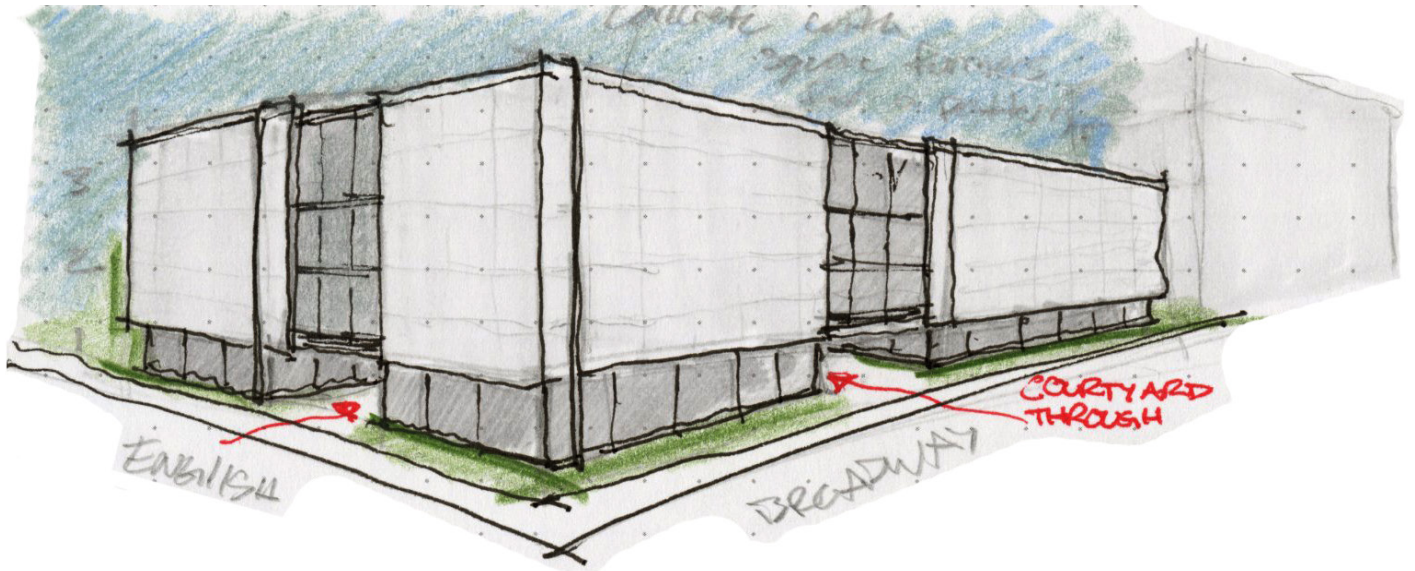
Because the surrounding area had very few waiting areas or green spaces, I knew that I wanted to divide the site and create a space away from the street. By placing my building in the right location, I could create a gathering space that would invite visitors.

Using rough boxes I made several models to test the overall fit of the program which was provided for us. I wanted to keep the public areas on the first two floors and reserve the top floor for private hostel space. These layouts each wrap around an exterior courtyard.

I created concept sketches for testing different ideas. Walls on the ground floor are almost entirely made of glass, allowing pedestrians to see through the building to an adjacent courtyard. An interior structure holds the upper walls, creating a floating mass. I wanted the materiality of the building to stay very simple: Concrete looking panels, and glass with black mullions.



Massing Models



Similar to initial concepts, the completed building form wraps around a courtyard. This courtyard is open to the East, inviting visitors from the modern medical campus across the street.

The building was formed around its entryway, at the street corner. As one travels through the building the spaces turn from public (lobby, gallery, office space) to private (Work spaces, loading bay, material handling).

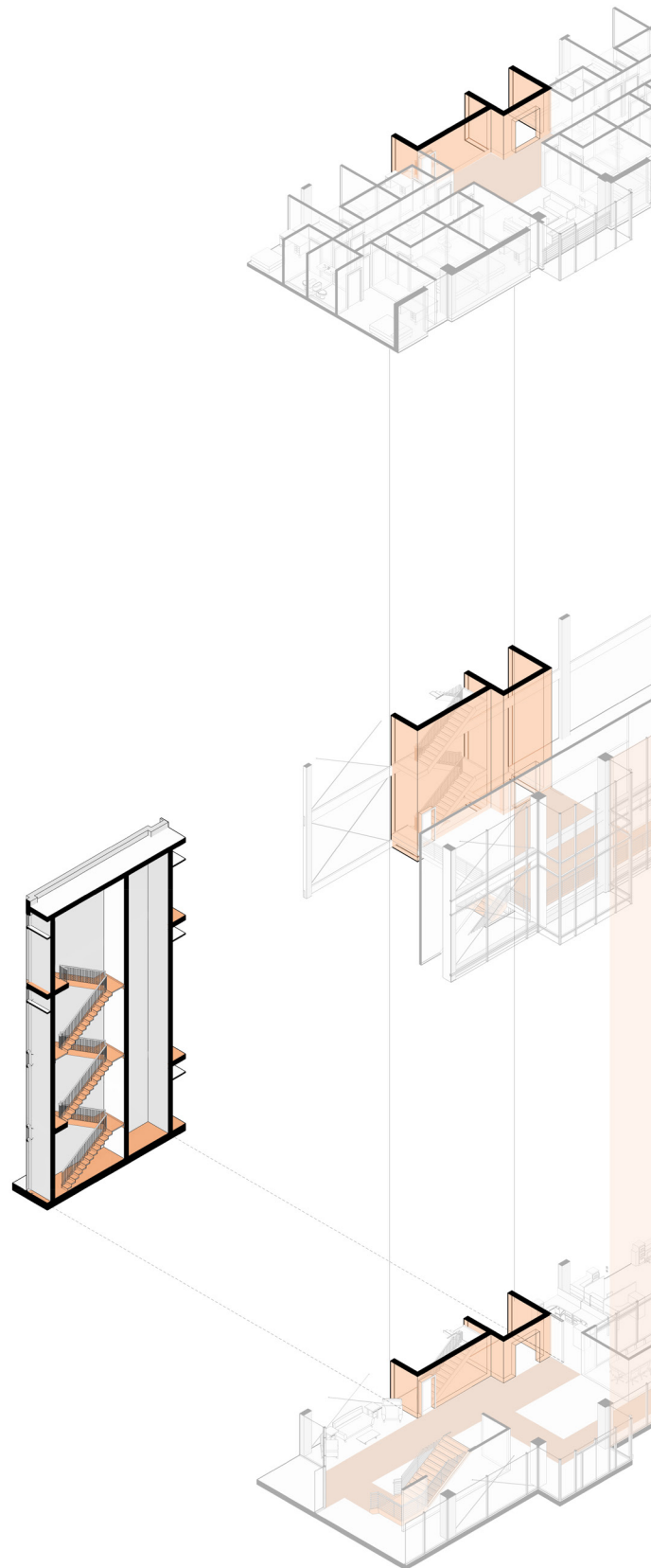
The lobby also leads to the second floor, which houses the buildings gallery and work halls in a large double height space. Also on the second floor are stairs and egress leading to the mezzanine level.

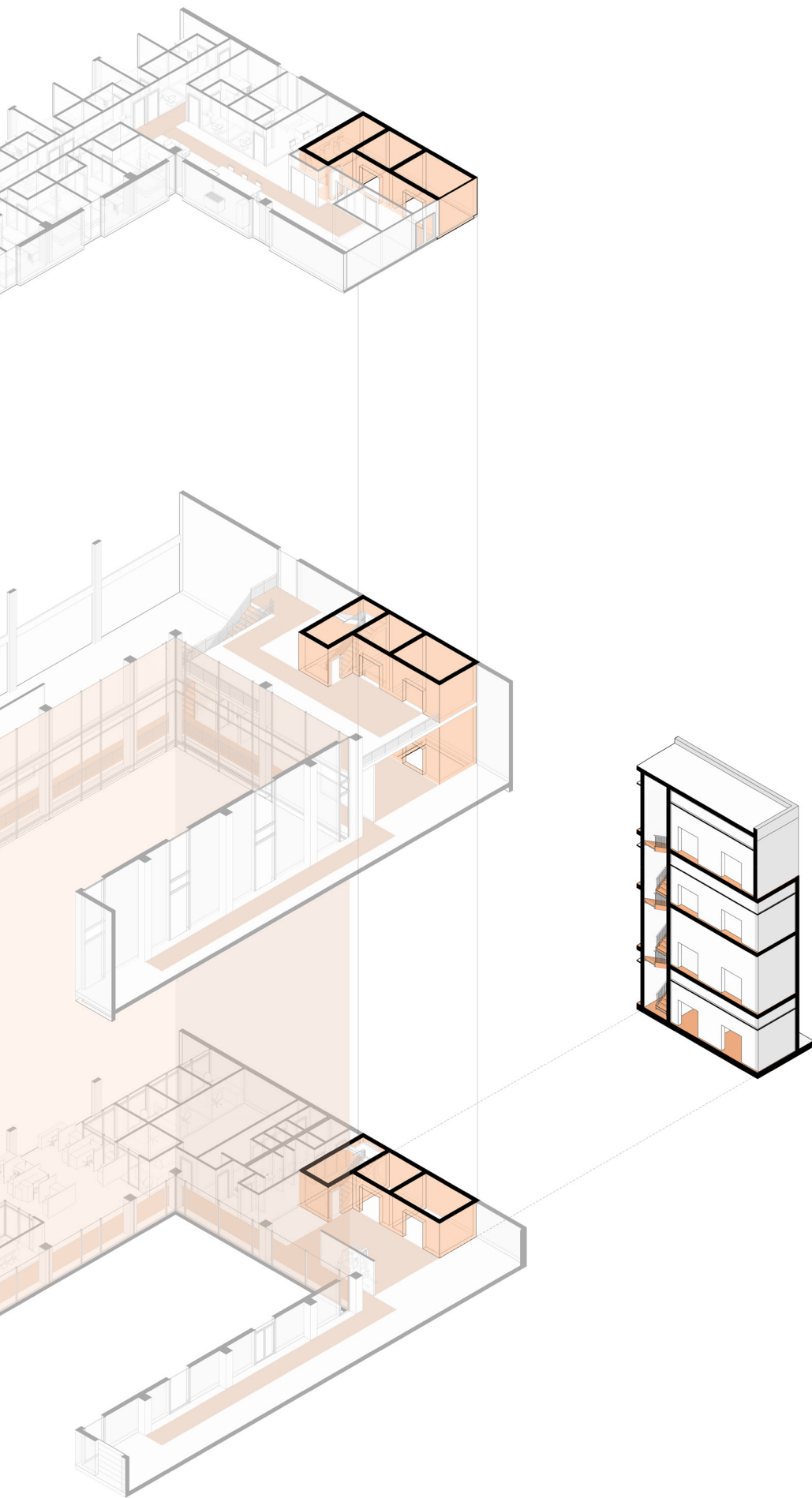
The third floor contains twenty individual hostel spaces, as well as a smaller gathering area and kitchen.

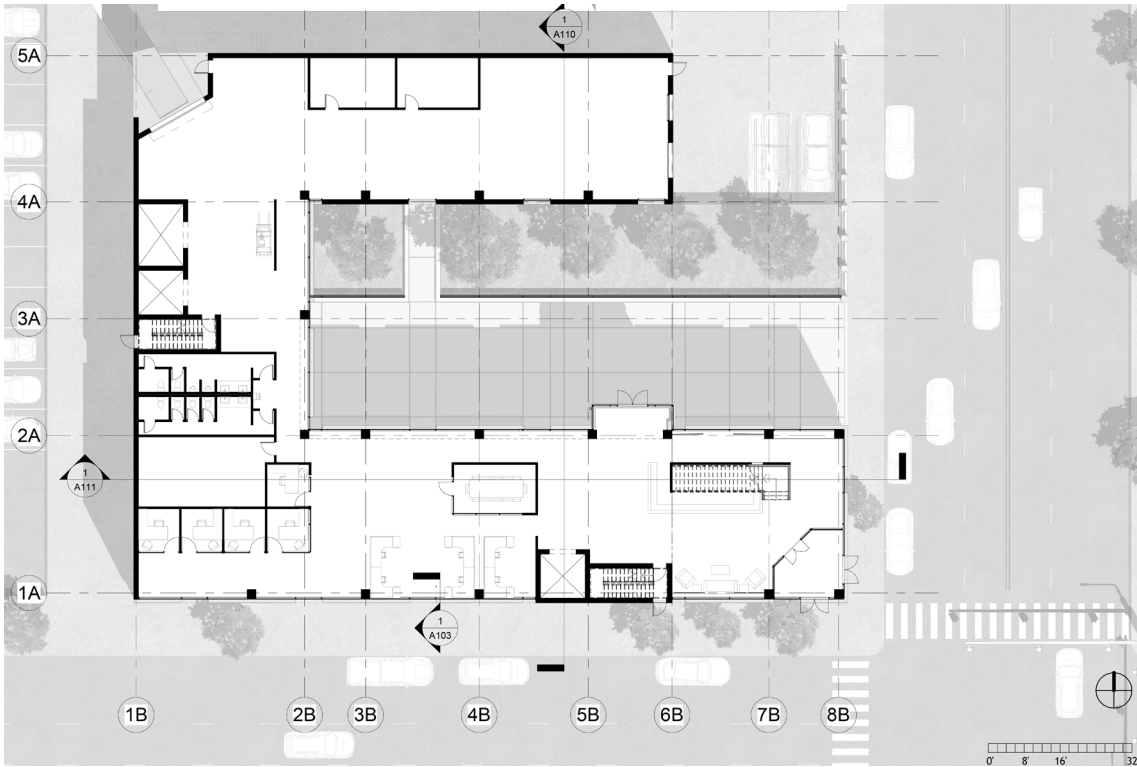
Effort was taken to stack circulation elements to simplify the building's layout. A main hallway loops around the building on both the first and second floors. Two building cores house egress, passenger elevators, and a freight elevator for moving materials.

Glass is used along the circulation loop to provide views into and out of the buildings main circulation pathways. Mullions and exposed concrete columns mimic the stripes of windows that are shown on the Southern facade, creating a pattern in the glazing rather than identical panels of glass.

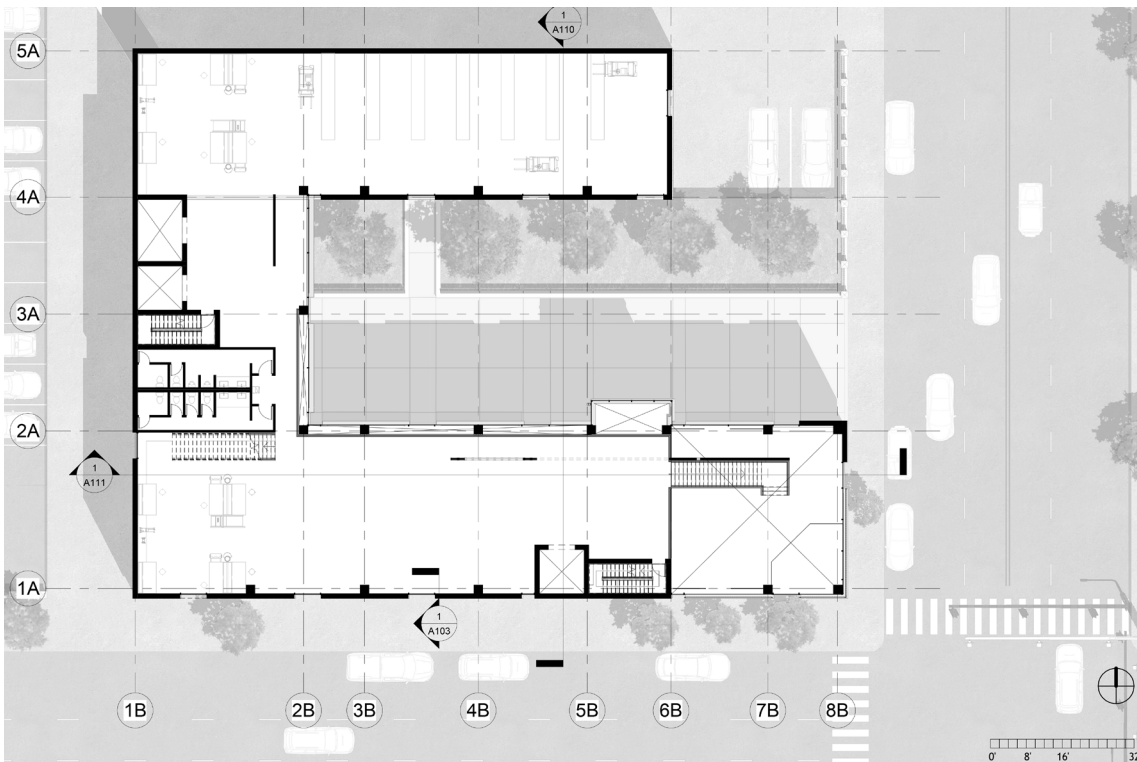
This isometric highlights circulation elements. Egress cores are separated, and shown in dark orange. The main circulation path is shown in light orange.







First Floor Plan



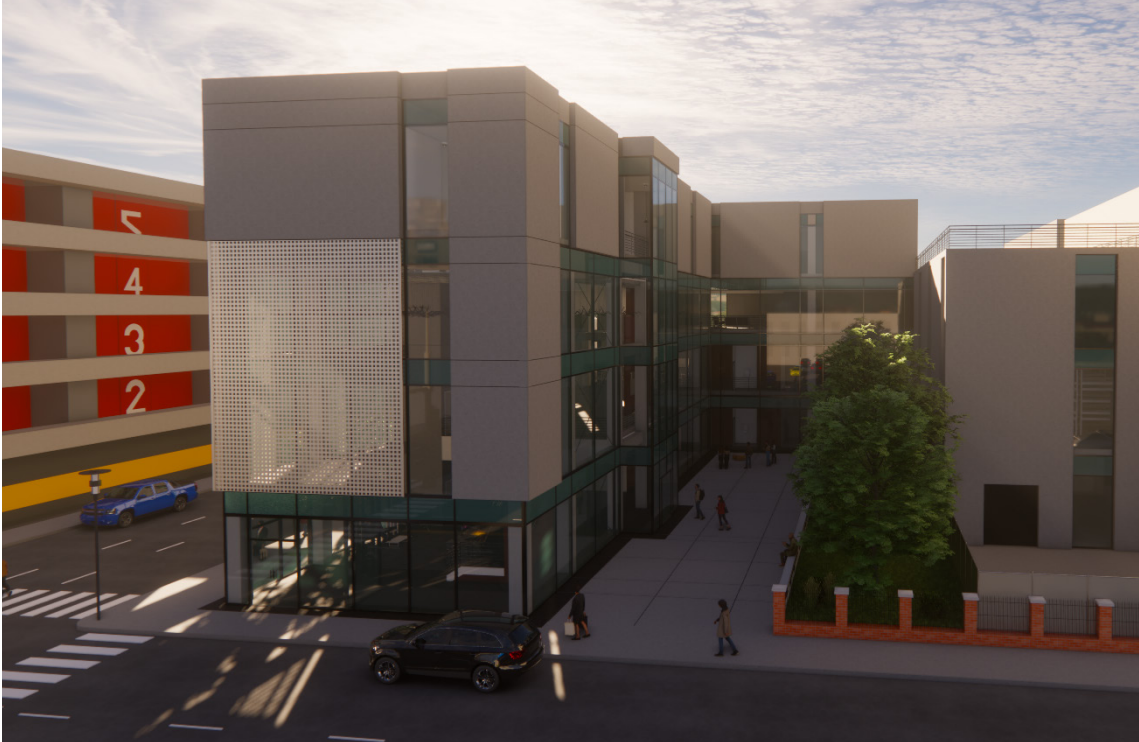
Second Floor Plan



Mezzanine



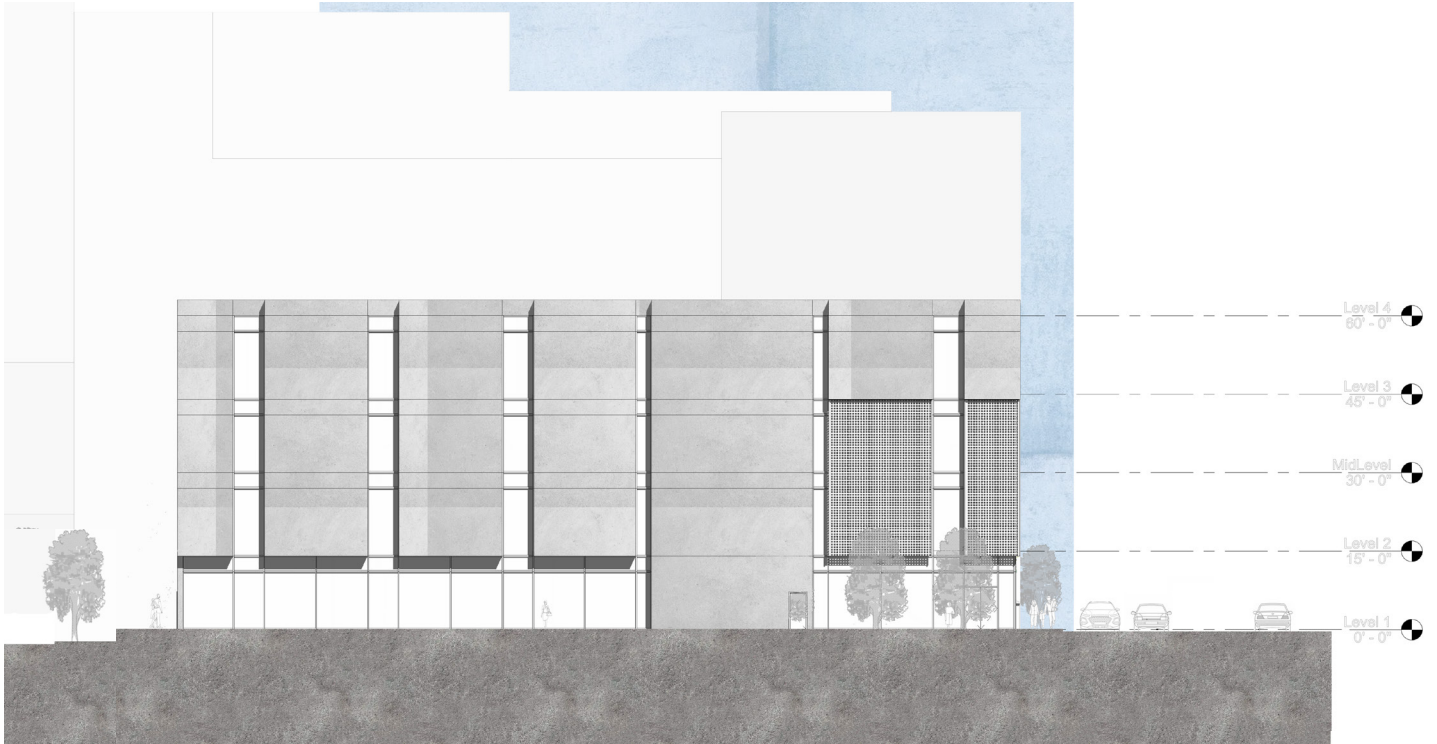
Third Floor Plan



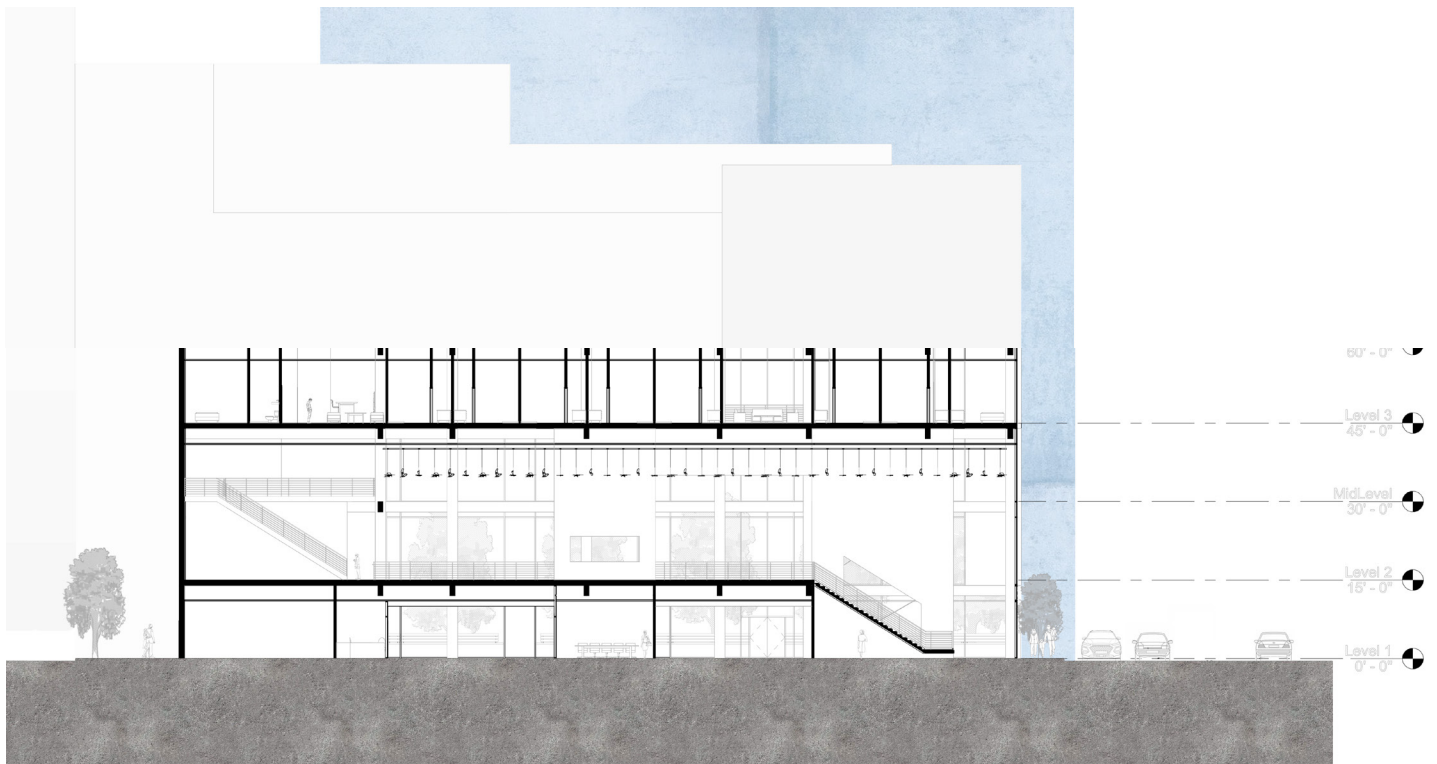
Courtyard



Lobby



South Elevation



South Section



Lobby Exterior



East Elevation

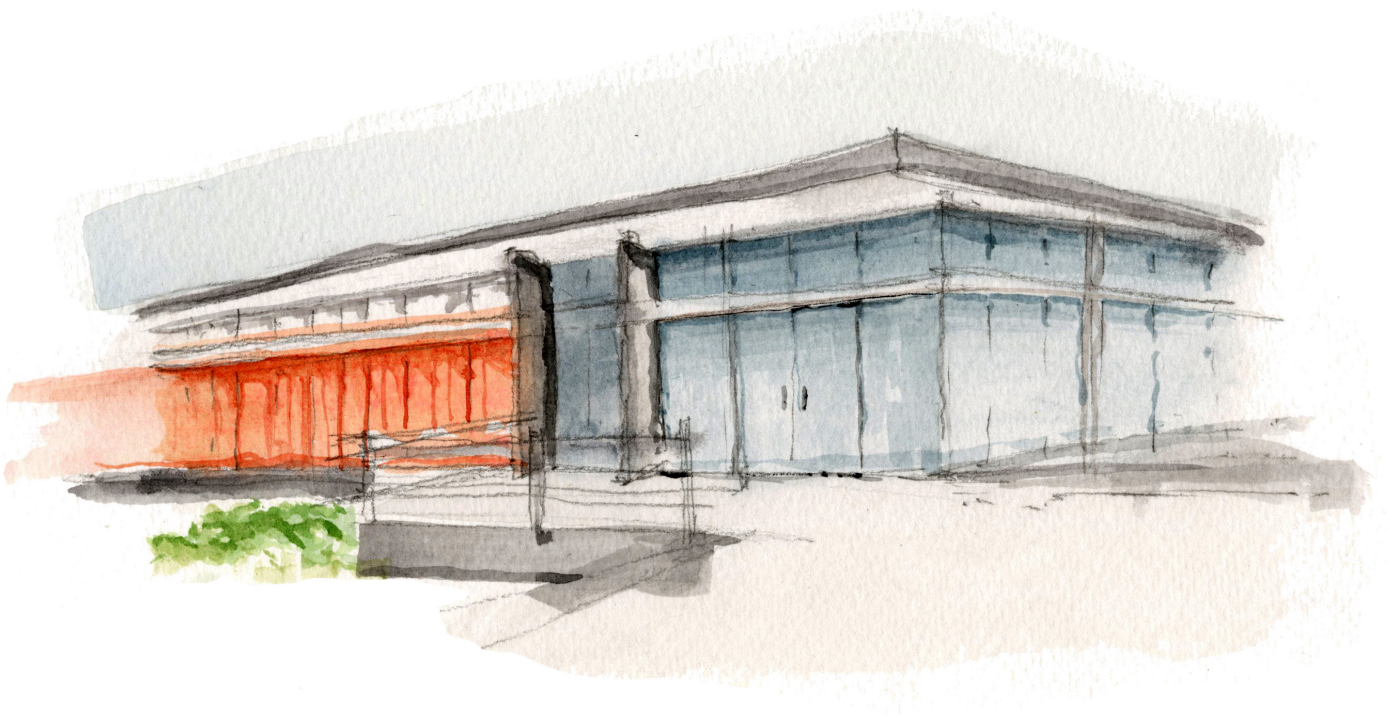


East Section

02. River Market Library

Professor- Shannon Criss

Spring 2024



The River Market Library project involved creating a public library near downtown Kansas City. The River Market itself is located just across the street and is made up from several smaller groceries, cafes, and restaurants, who have an open farmer's market on the weekends. This sort of community creates the perfect space for the River Market Library.

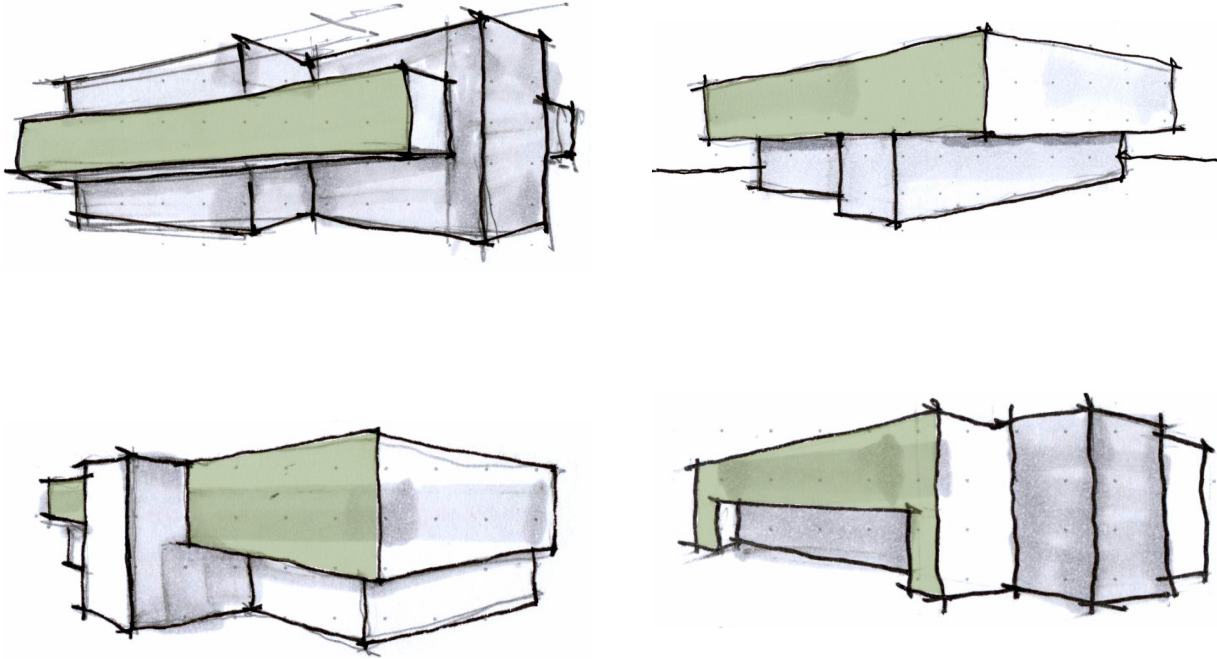
Both the River Market and the City Market Park, which is also just across the street from the site, influenced the location of my buildings placement on the site as well as the design of my buildings entryways and programming.

I decided to place the project on the Eastern side of the site, with its entryway directly off of main street to create a strong corner profile.

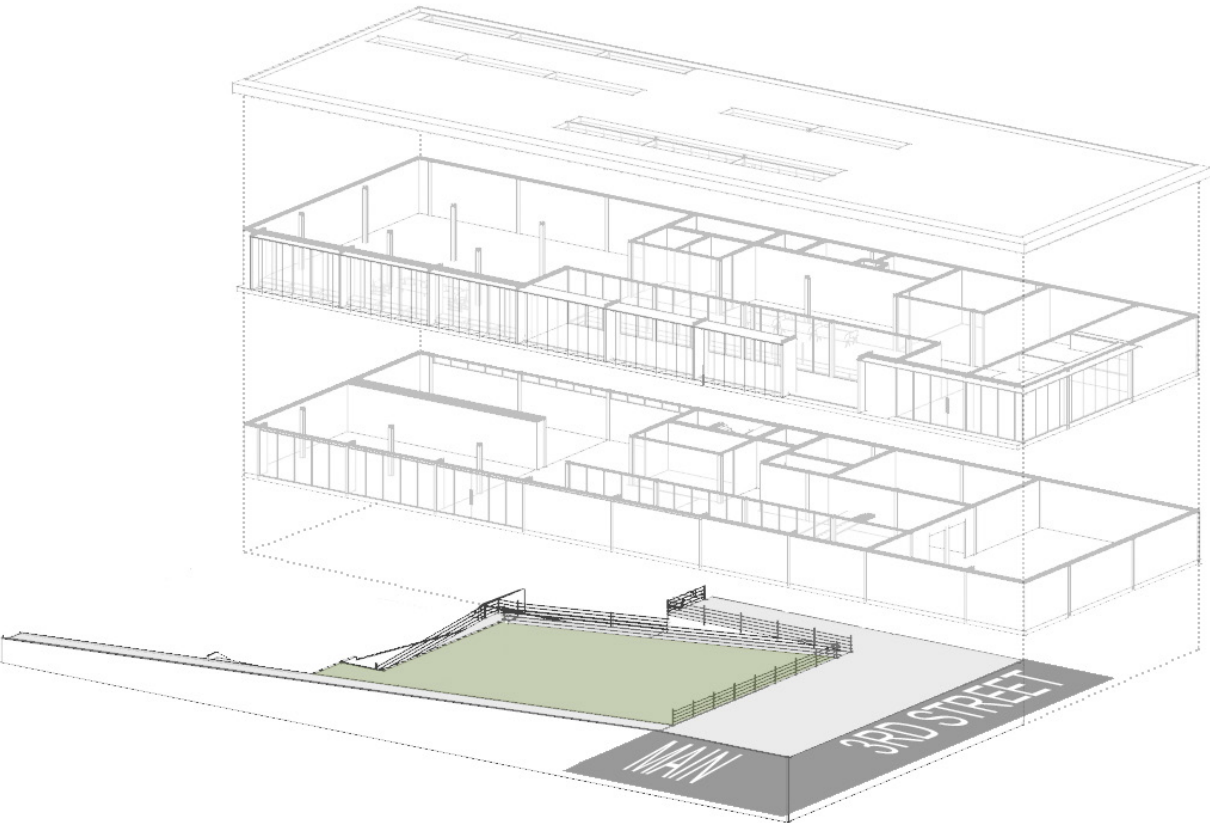
Placing the building to the East allowed for a large open space West of the building to relate with the City Market Park. The entry's proximity to 3rd Street also promotes visitation due to the nearby street car.



Site map | River front, Kansas City



Massing Sketches

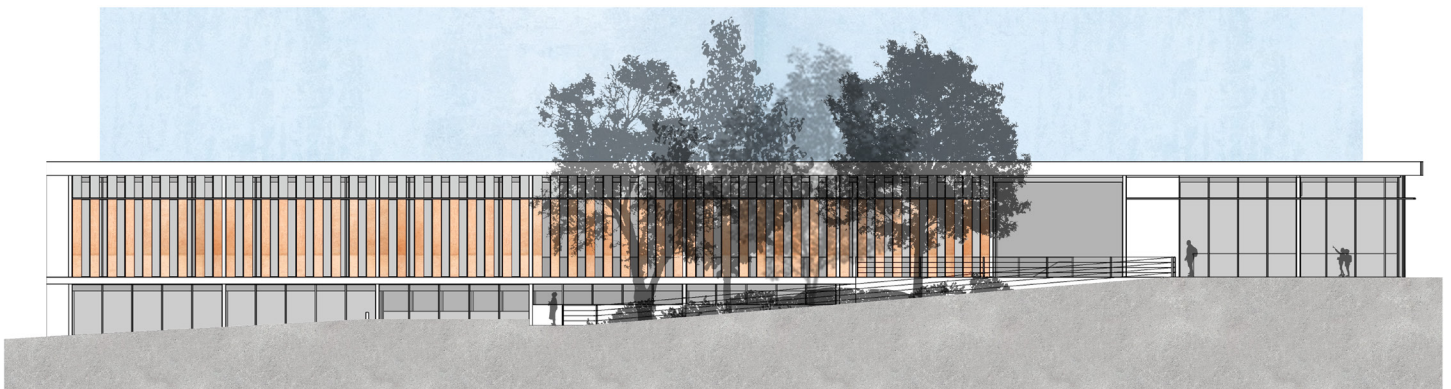


Axonometric

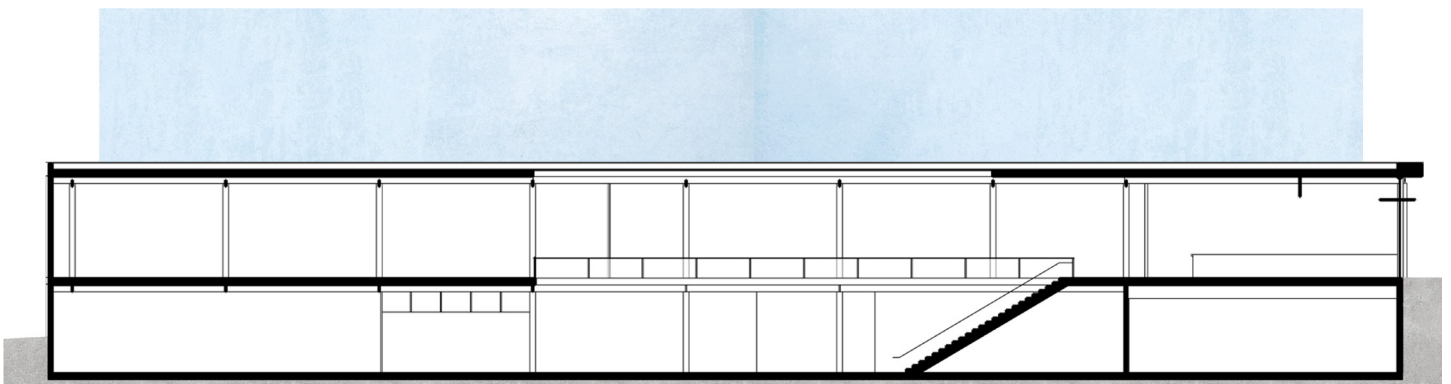
Initial massing sketches explored forms with a prominent entrance on the Southwest side of the building. Using the street corner as the building's main entry meant it would be more noticeable and accessible. This corner also had a street car which passed periodically.

The library's programming involved keeping more public spaces such as the collections, entry, and workshop, towards the West side of the building. This allowed natural light to reach the most public spaces and gave these spaces great views of Main Street and the building's adjacent courtyard.

Programming that was less public, such as restrooms, staff spaces, and the auditorium, were either located on the bottom floor or on the East side of the building.



West Elevation



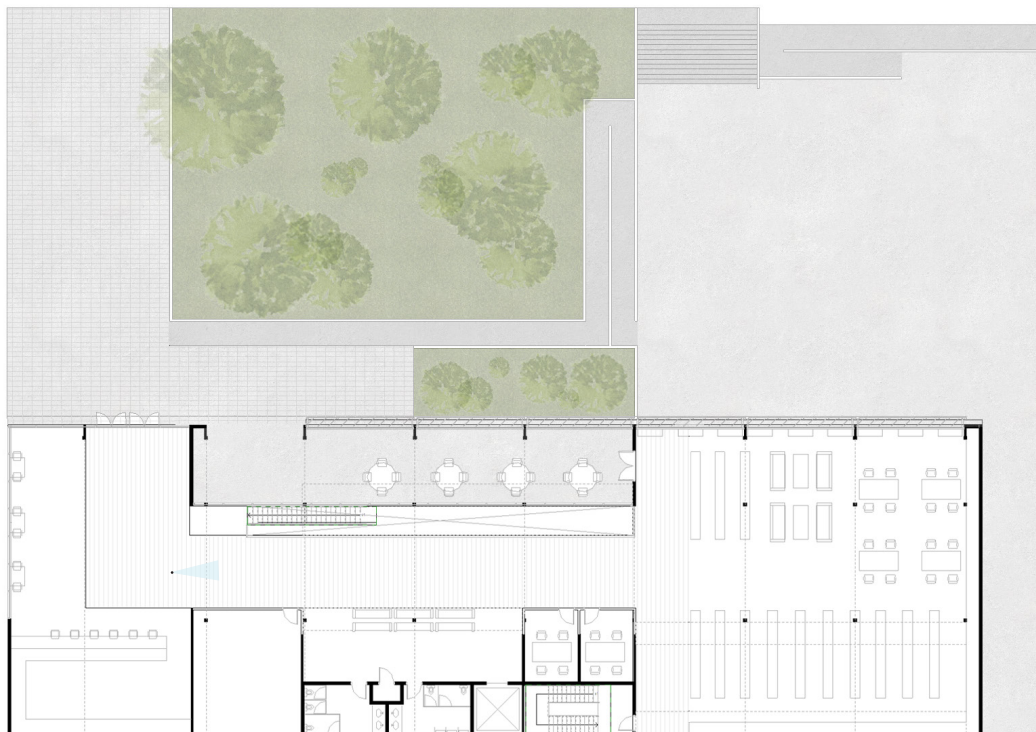
West Section

The top floor of the library, which was accessed by the main entry, contained most of the quieter spaces including collections, adult reading space, and a number of private meeting rooms. The bottom floor contained the children's and teens reading spaces, computer lab, staff rooms, and auditorium.

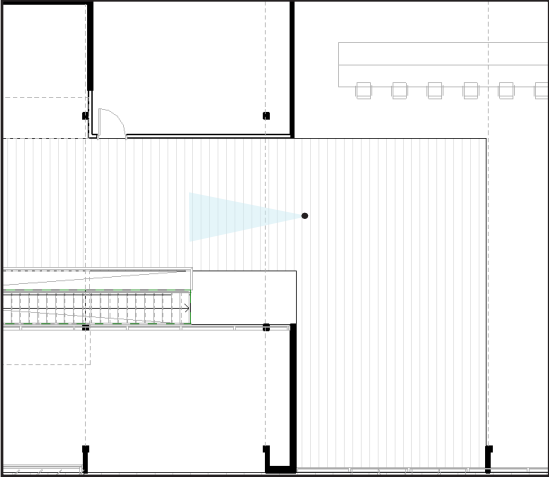
The building was located on the Eastern side of the site, giving open space and views to the West of the building. Because of this, I placed more public spaces on the West of the building, giving them ample sun light and views. More private spaces or core spaces such as egress, staff areas, and bathrooms were located to the West.



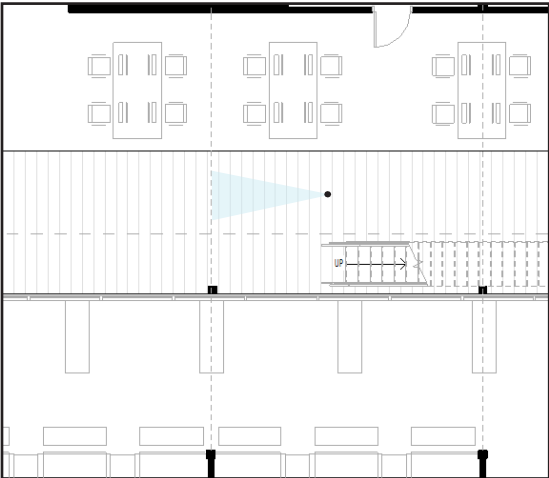
Bottom floor plan



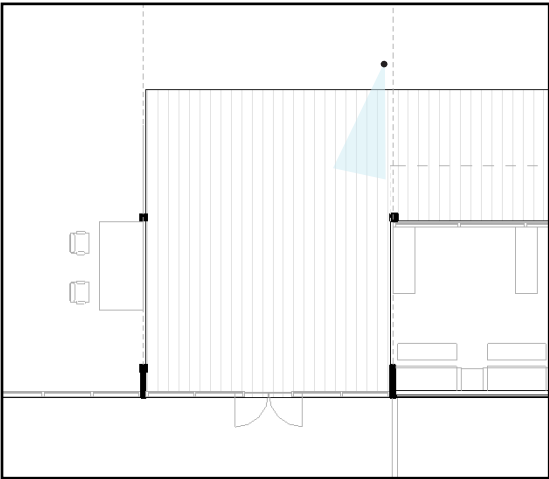
Top floor plan



First floor | Entrance



Bottom floor | Circulation

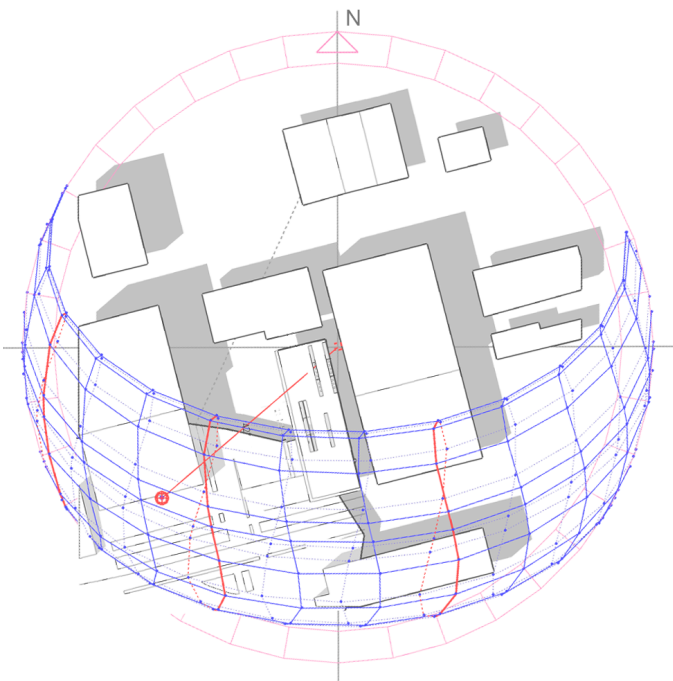


Bottom floor | Courtyard view

A large portion of the building's design was focused on the Western facade. Being exposed to the intense afternoon sun meant that the facade had to employ some sort of sun shading to reduce solar heat gains.

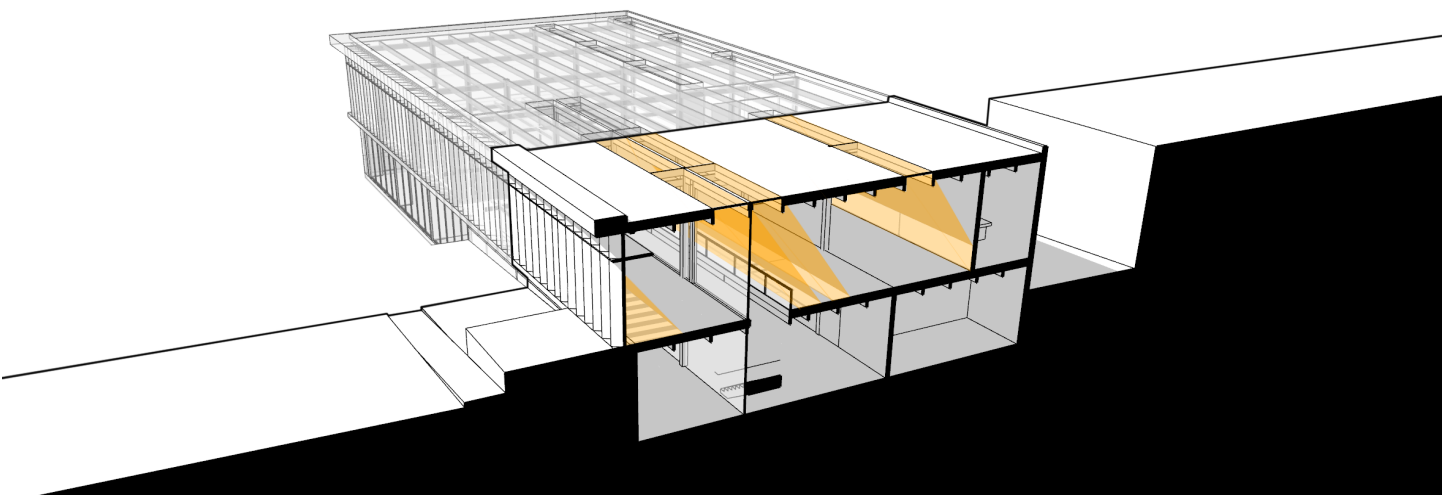
I used a series of maneuverable, aluminum louvers to cover the top floor glazing. I gave the louvers a vibrant orange color to add color to the buildings almost colorless exterior. This way the building better flowed with the colorful street art on display in and around the site.

A number of skylights were placed on the roof to allow sunlight into darker portions of the building (Areas along the Eastern wall, and through the open staircase to the bottom floor).





South Perspective Section



Daylighting Section



Daylighting Section | Skylight Focus



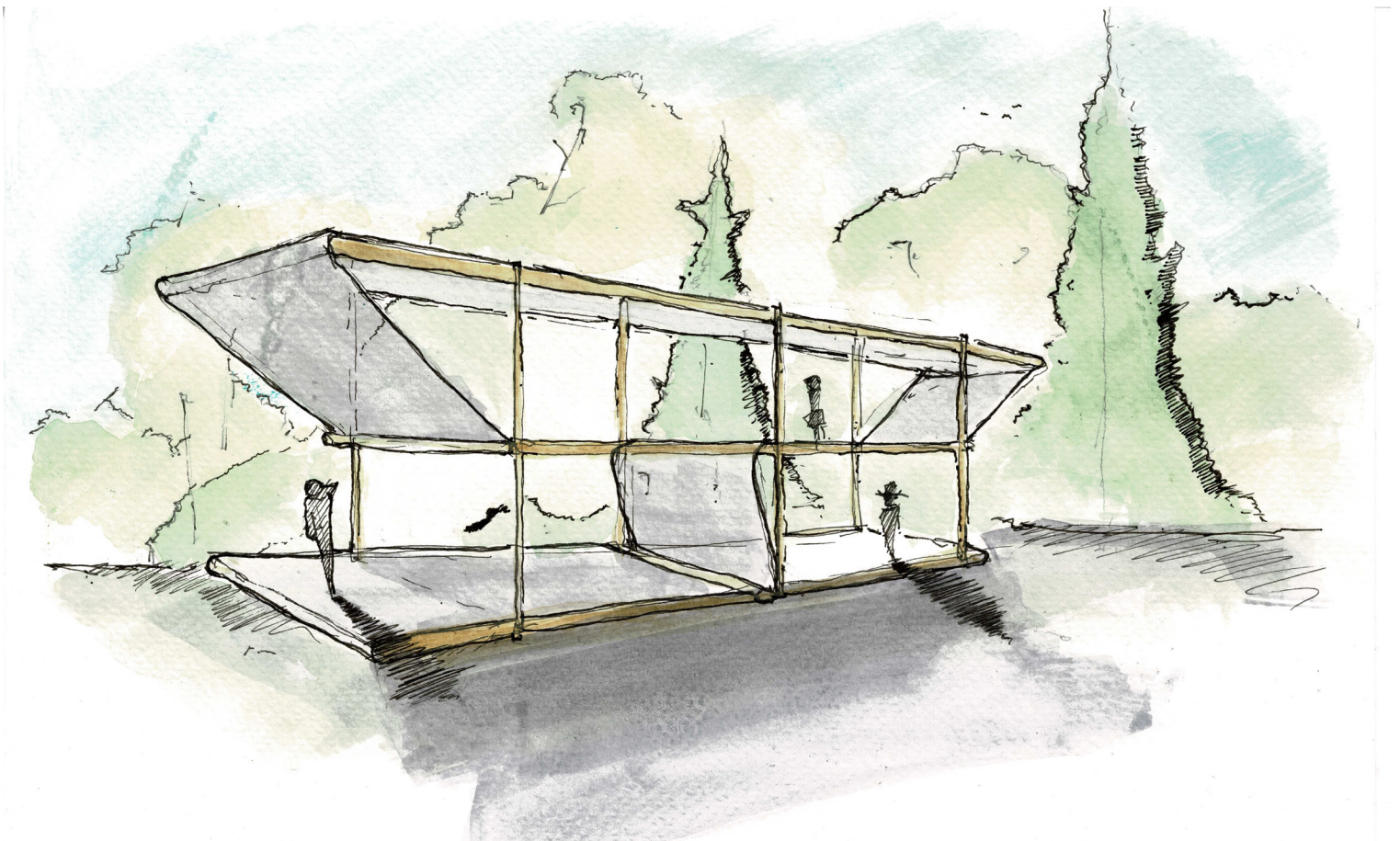
Exterior Courtyard



03. Riverfront Pavilion

Professor - Shannon Criss

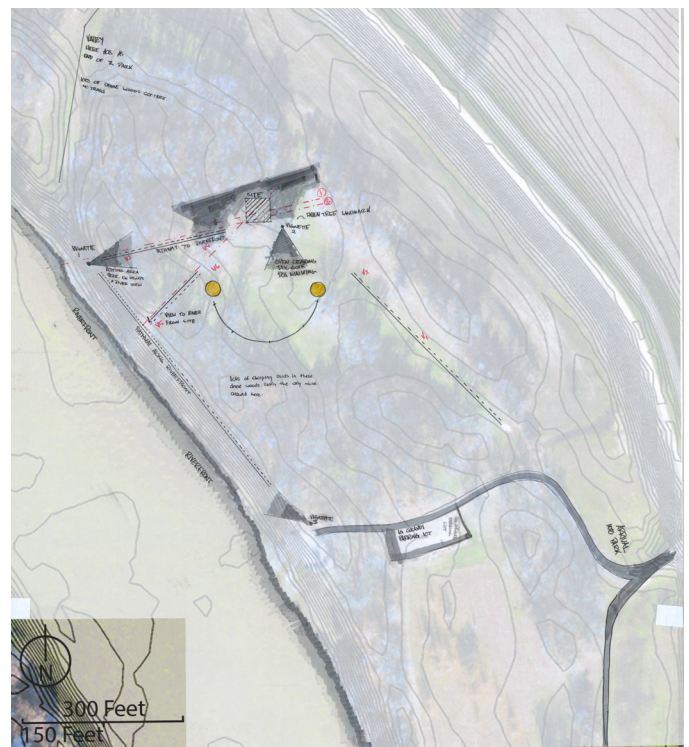
Spring 2024



The Riverfront Park Pavilion project showcases a series of light studies that evolve into a final model. Different strategies and materials are used to show the intricacies of light and how it interacts with a building's facade and structure.

This project was my introduction to designing for a specific site. After creating our initial models, I walked the site and chose a location to place my final model.

Riverfront Park is a large wooded site with a main pathway that travels along the river North. My pavilion is located away from the river near a large clearing to the East. This way, the pavilion z disturb the river's natural scenery, yet it is accessible and has several views to the river from where it is located.



Riverfront Park Site Map

In some of my first light studies I used trace paper along with presentation board and card stock to diffuse the light entering and exiting the model.

The first model simply replaced the corner of a box. Something happened with the light leaving the box, where a slit in the top of the box projected a set of two lines on the trace paper from the inside.

This interaction with the light made me continue using trace paper to diffuse light in my next light study which uses the trace paper to project the structural frame of the model onto the walls, creating an interesting facade.



Light Study Set 2 Photo



Light Study Set 3 Photos

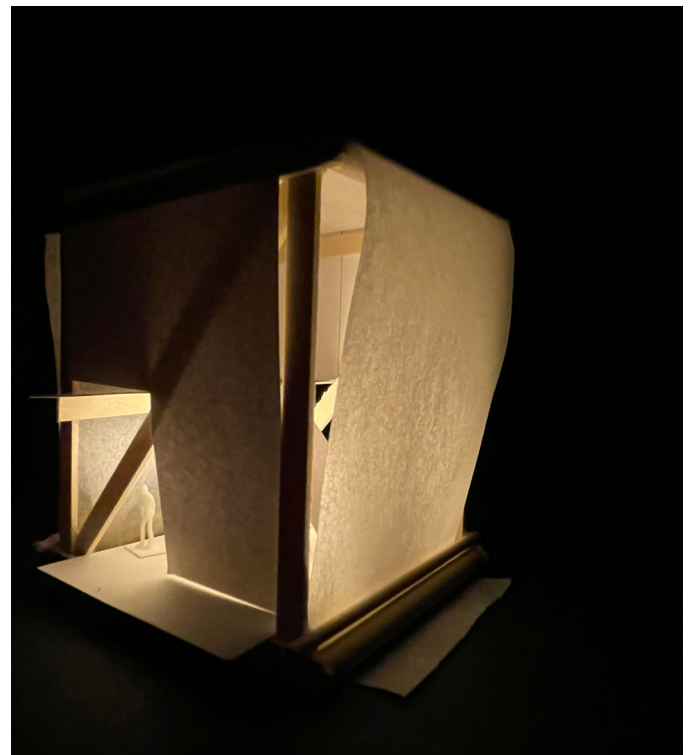




The penultimate model of my project continues to use thin paper to diffuse light and project specific elements onto its facade. This model also uses the paper to wrap around the top of the model, creating the front and back facades.

The trace paper and card stock walls can be removed, revealing the interior structure, which is a simple box shape with diagonal bracing.

The thinner walls on the front and back of the model allow for unique interactions between the two floors of the model. Because one wall is snug to the edge of the floor, it separates the light between floors where the other wall, which is separate from the second floor, lets light between the two floors freely.



Light Study Set 4 Photos

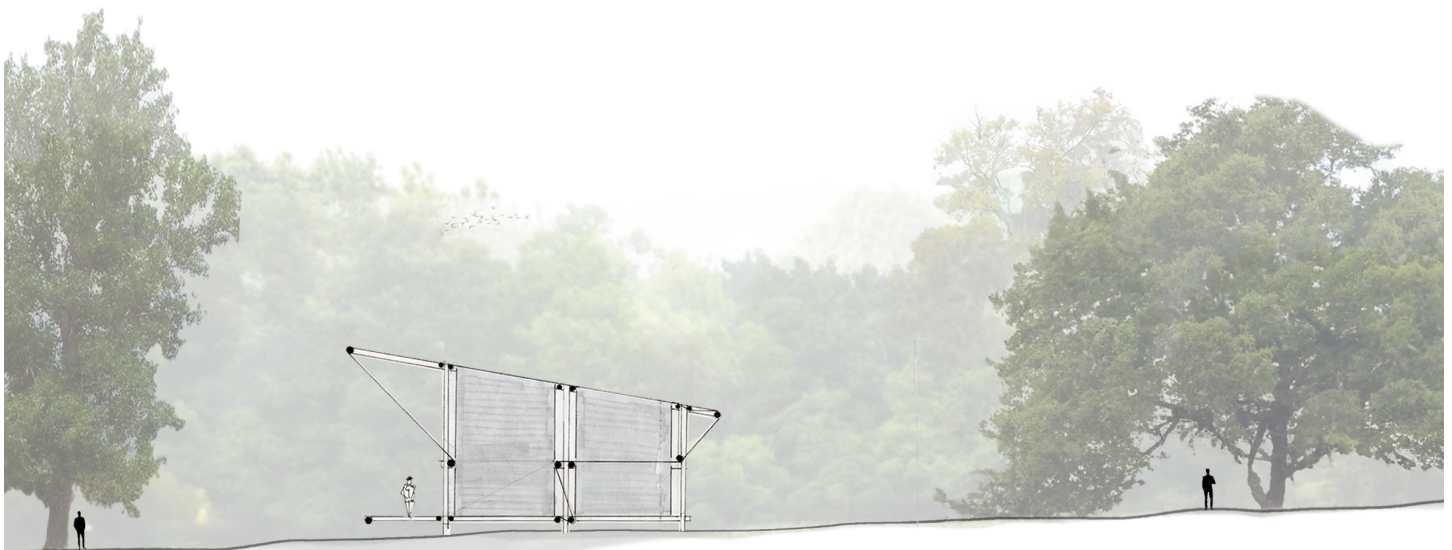
The final model of this project is meant to combine the techniques, materials, and ideas of my previous light studies. It is meant to use these techniques and materials to better adapt to the site and give the user a better experience.

The model uses transparent material (vellum) that wraps around four sides of the model to diffuse light and create surfaces such as roofs, walls, and floors. It also uses bass wood, which forms the structure and weaves with the wrapper so that both structure and facade walls are visible from the exterior of the model.

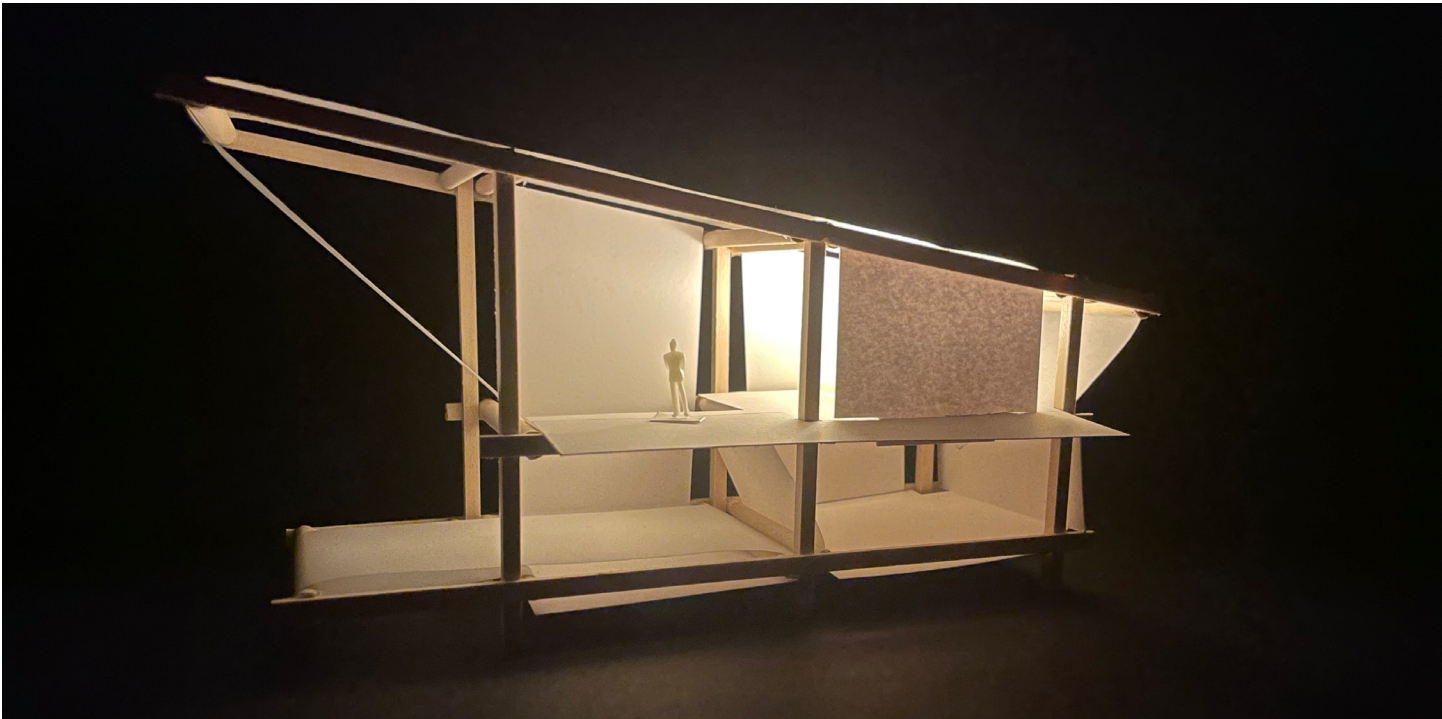
The model is purposefully left fairly open to accommodate the natural surroundings and recreational nature of the building. The Southeast side of the model is left completely open to allow access to and from the open field that the site is located next to.

The balcony on the second level of the building is also facing the Southeast side of the building. I imagine that users of the building could rest here and appreciate the frisbee golf, dog walking, and other recreational activities that are happening below.

The front of the building is facing the Southwest, which follows a pathway directly to the riverfront. This way, the building can direct people to the river and provide a view even though the site is located away from the riverbank.



Pavilion South Section



Pavilion Photos

04. Homeworks USA Community Area

Professor - Nils Gore

Spring 2025



The Homeworks USA Community Area project is a group project that I participated in during my Spring, design build semester. The site is located at 26050 Chieftain Rd. Lawrence, Kansas, which is a developing complex of tiny homes being built by the Homeworks USA team.

The project scope was open ended, and the client, Frankie, was open to any ideas that the class could come up with. Ideas included retaining walls, outdoor seating, shade structures, fire pits, and garden beds among others. The ultimate location of the project was also up for discussion, however, we ended up using an empty existing foundation on the Southwest corner of the site for our final project.

By the end of the schematic design phase, the class decided to make a deck and pergola structure, using steel tubing and perforated panels, as well as some recycled steel columns that were unused from a previous project.



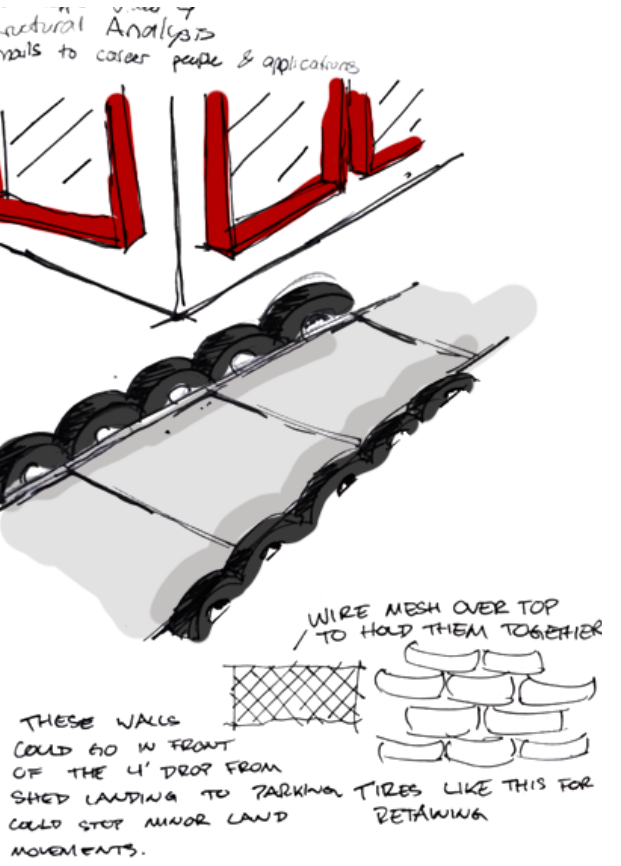
Site Map | Homeworks USA

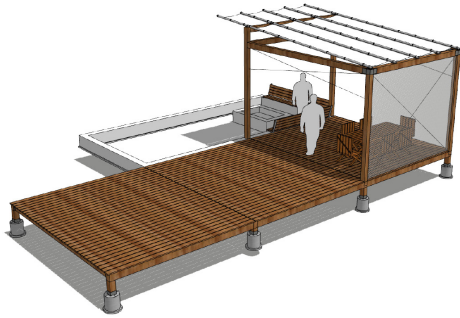


Site Before Construction

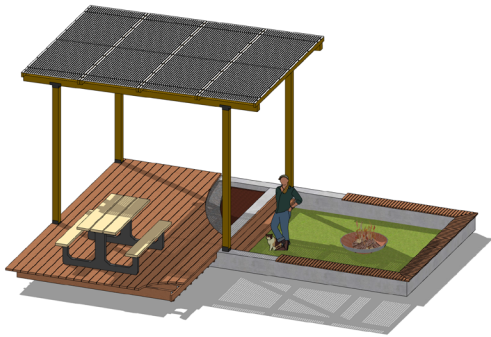
After our initial phase of schematics, the scope of our project narrowed to explore a shading structure and deck, which would be placed above or around an already existing 12' x 24' foundation.

Some things I wanted to consider when deesigning were ease of maintenance, and ability for pre-fabrication.

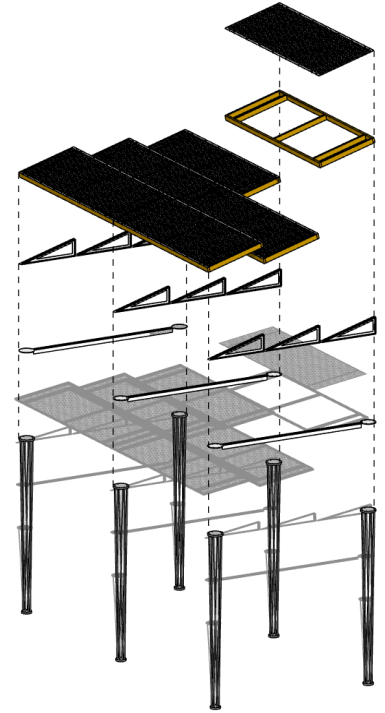




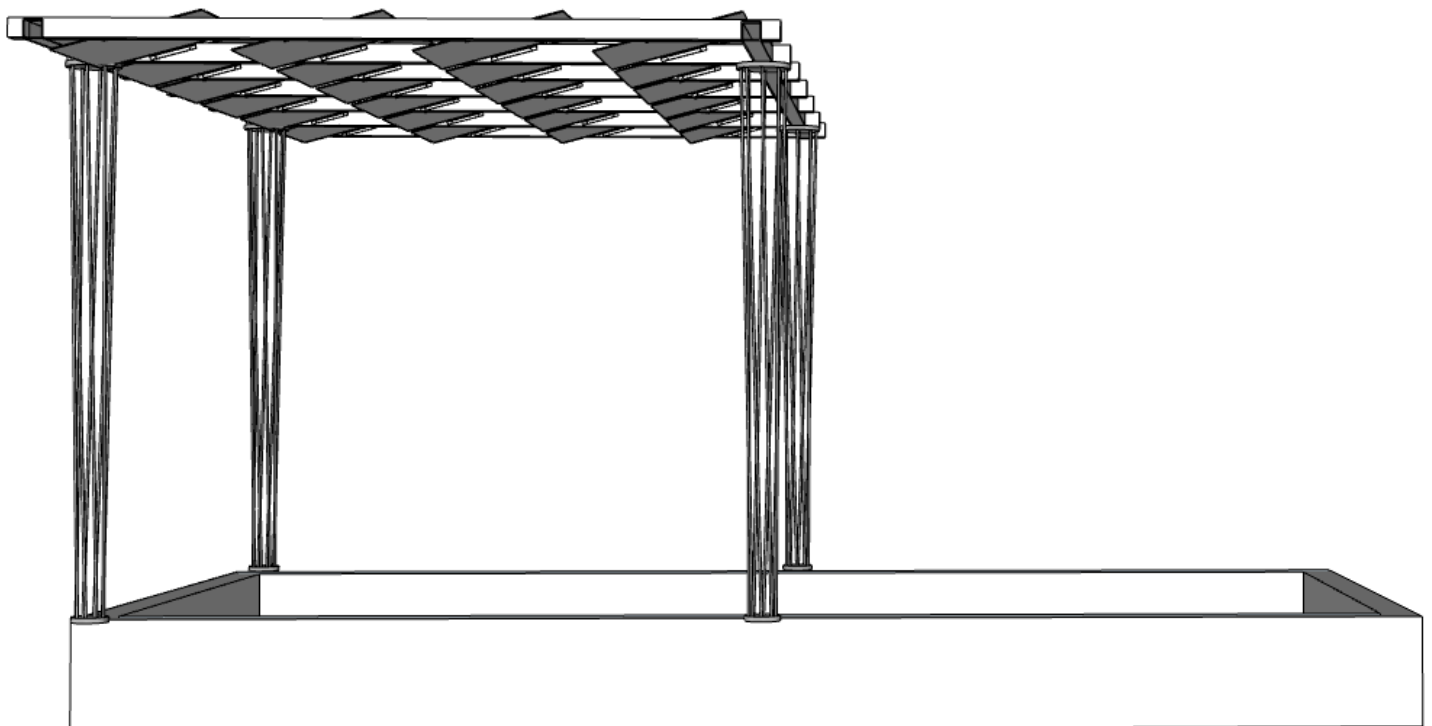
Canvas Pergola East of Foundation



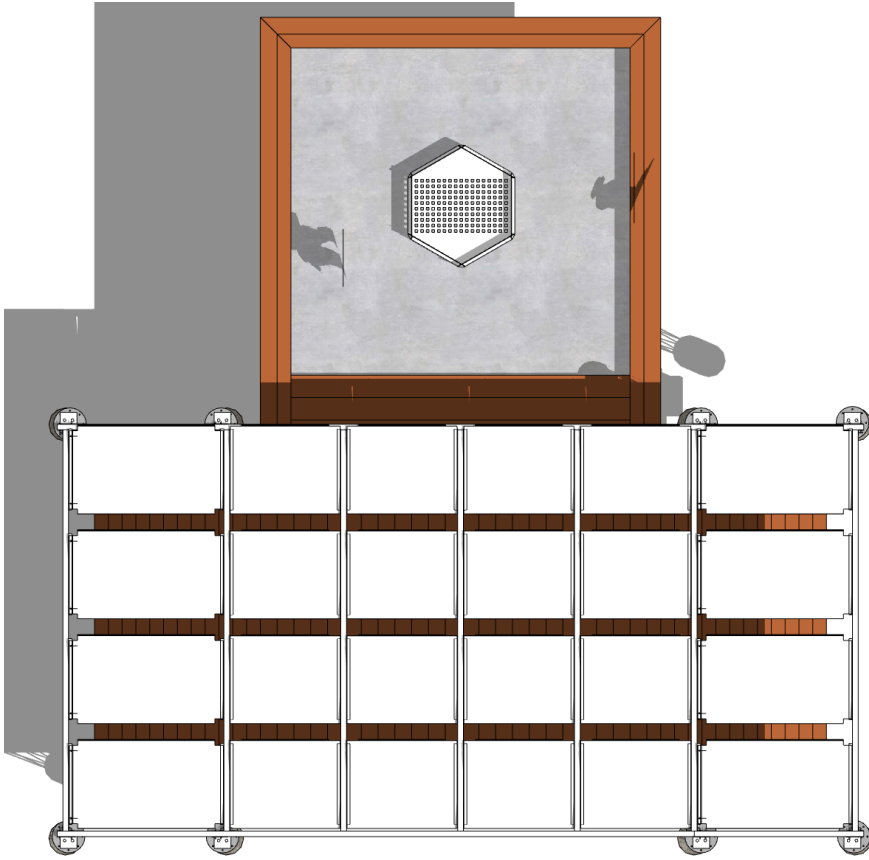
Pre-Fabricated Model Concept | Oscar, Emilio



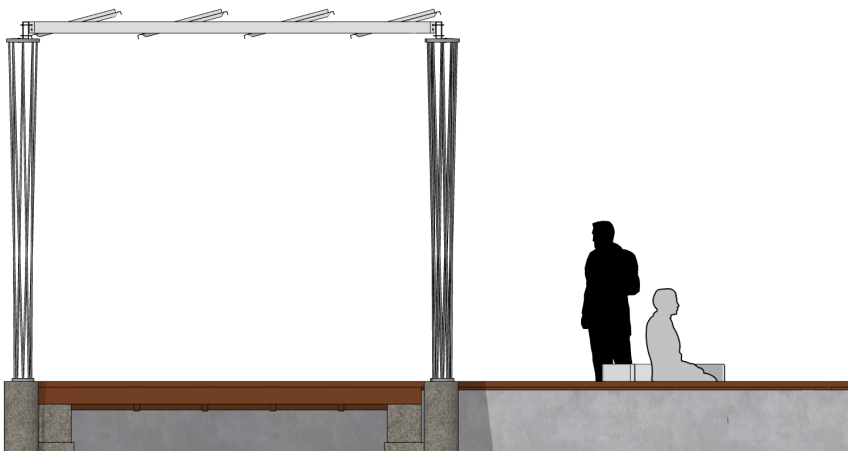
Pre-Fabricated Model Concept



Penultimate Model | Oscar, Erica, Nikki, Ryley, Rica

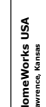
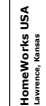
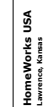
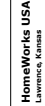
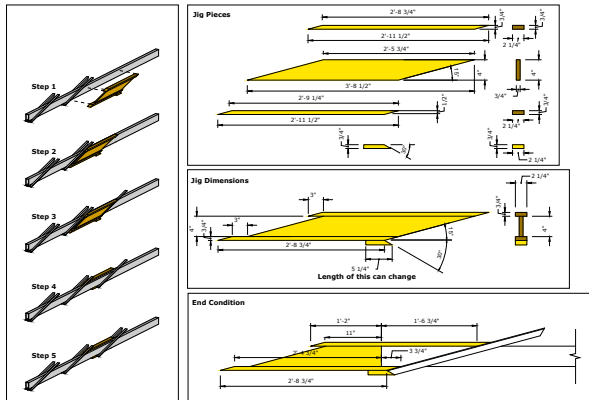
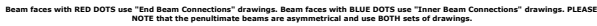


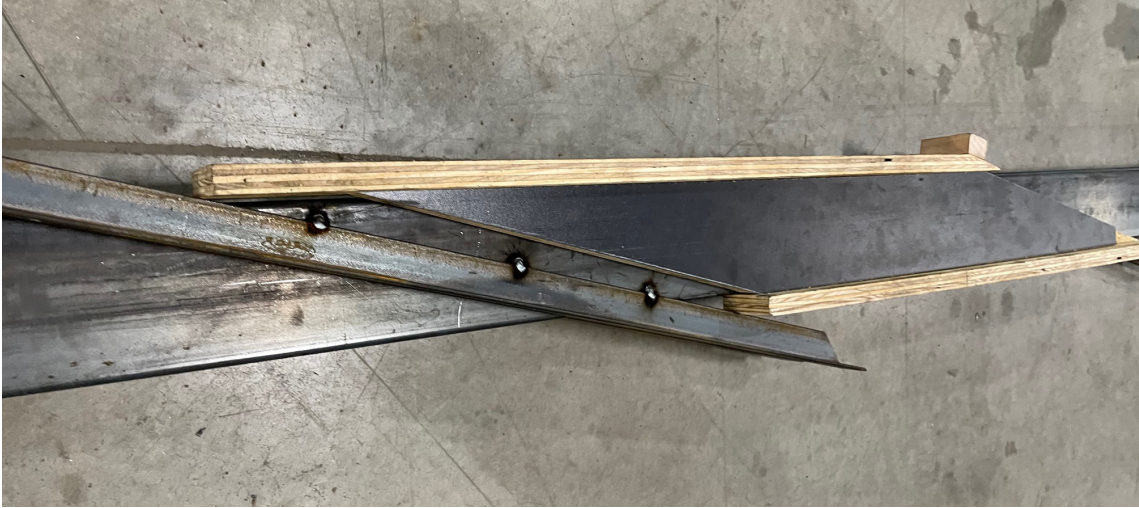
Top View of Final Model



East Elevation of Final Model

The hope for these drawings was that classmates would be able to follow them without needing clarification from me.





Fabrication Process Photos

A large portion of my effort in the project went towards the fabrication process of the roof itself. Because I made many of the drawings detailing the assembly of the roof, It made sense that I stayed in the shop and worked on drilling and welding.

This project was my introduction to metalworking. I ended up becoming fairly sufficient with both the mag drill and welder because of my involvement in the fabrication of the roofs steel frame. Welding steel angle and drilling holes through the steel beams and girders made up most of the steel frames fabrication process.

Because of some small alignment errors in the foundations that we had already poured, we also had to design a set of custom column caps which collected the girders and columns.

The design allowed for all of the roofs pieces to be pre-fabricated in shop. Because of this, the assembly on site went very smoothly and we were able to build the entire pergola in a single afternoon.



Assembly Photos



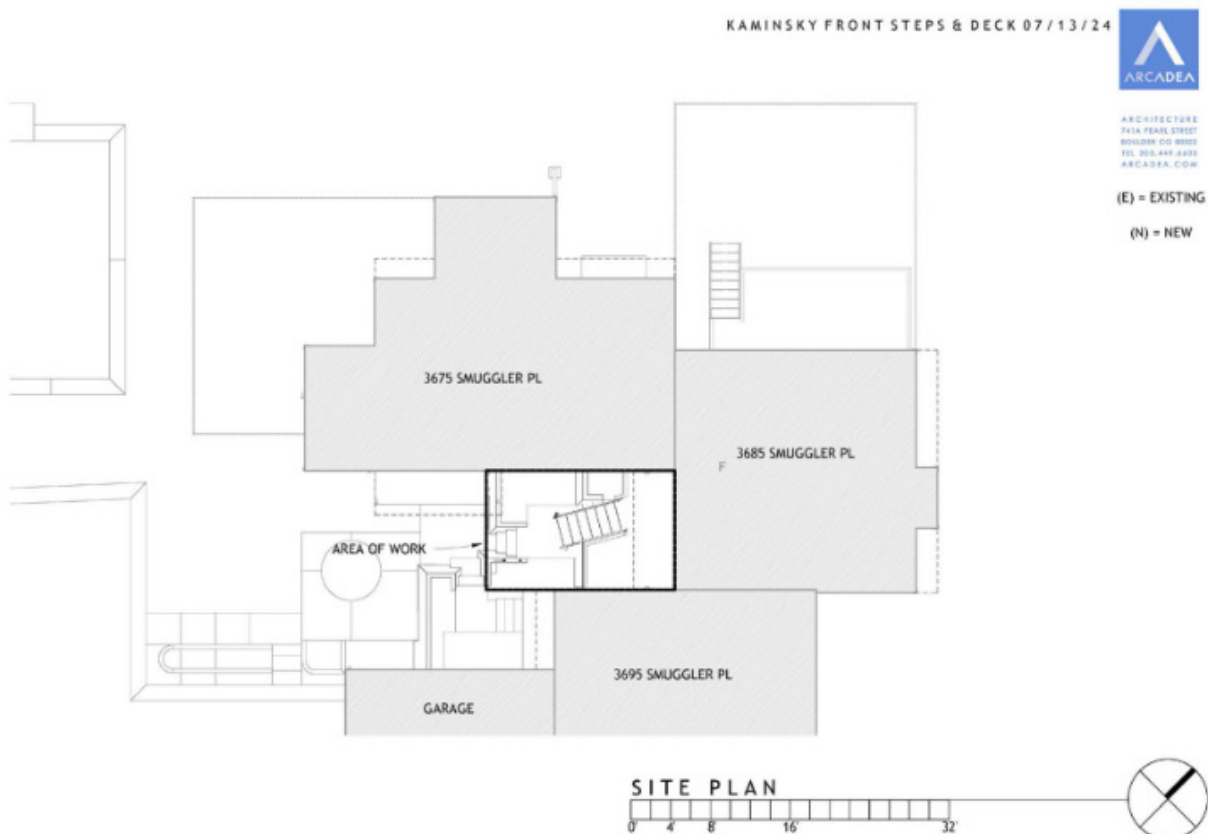
Final Panel Assembly



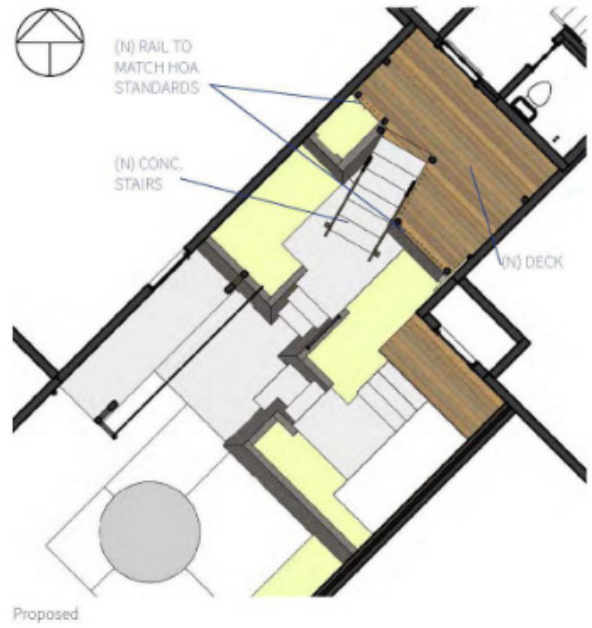
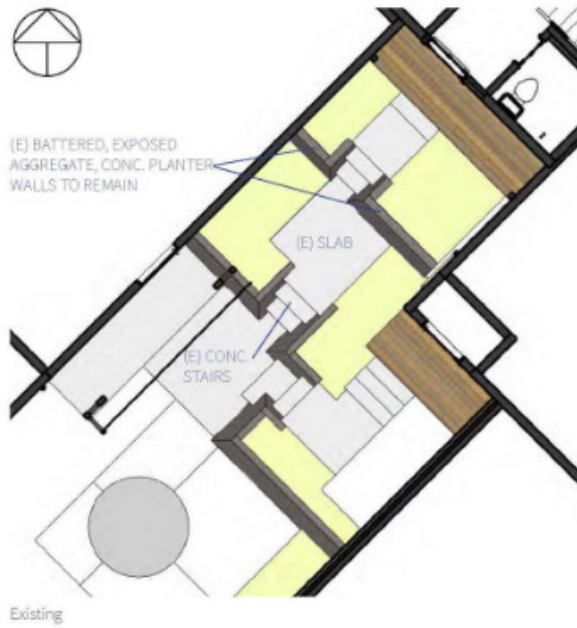
Final Product Photos

05. Additional Works | Internship

During summer 2024, I worked as an intern at Arcadea Architecture in Boulder. One of the things that I worked on was a small porch expansion project. The following is the document set which I developed in both Revit and SketchUp including plans, elevations, and sections.



(N) = New
(E) = Existing



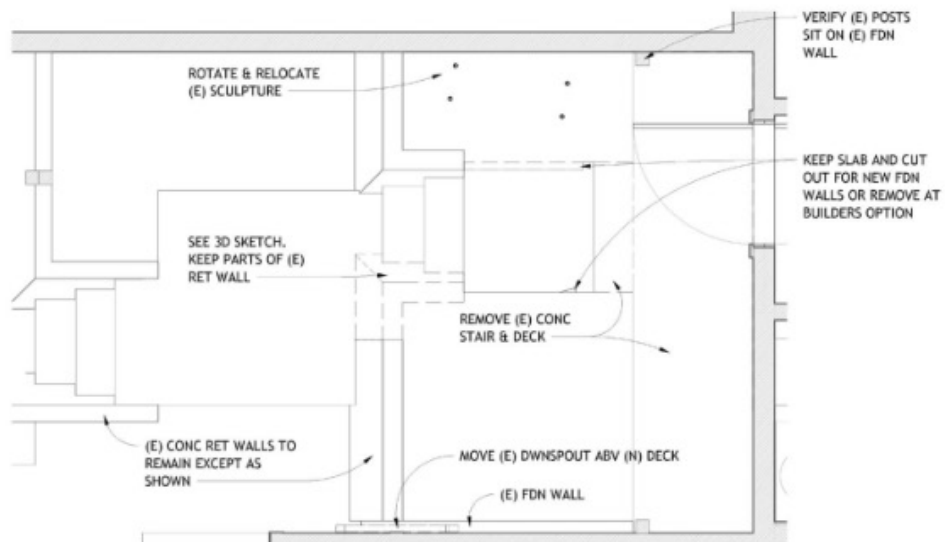
KAMINSKY FRONT STEPS & DECK 07/13/24



ARCHITECTURE
741A PEARL STREET
BOULDER CO 80502
TEL: 303.447.6400
ARCADEA.COM

(E) = EXISTING

(N) = NEW



MAIN LEVEL DECONSTRUCTION PLAN

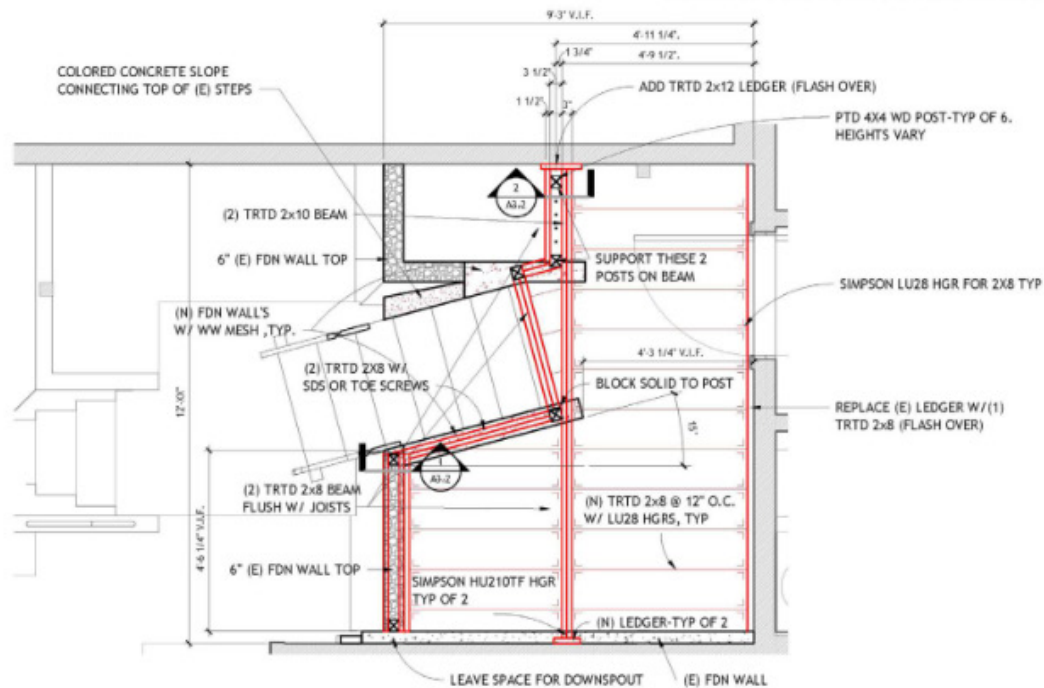




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7414 PEARL STREET
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ARCADEA.COM

(E) = EXISTING

(N) = NEW



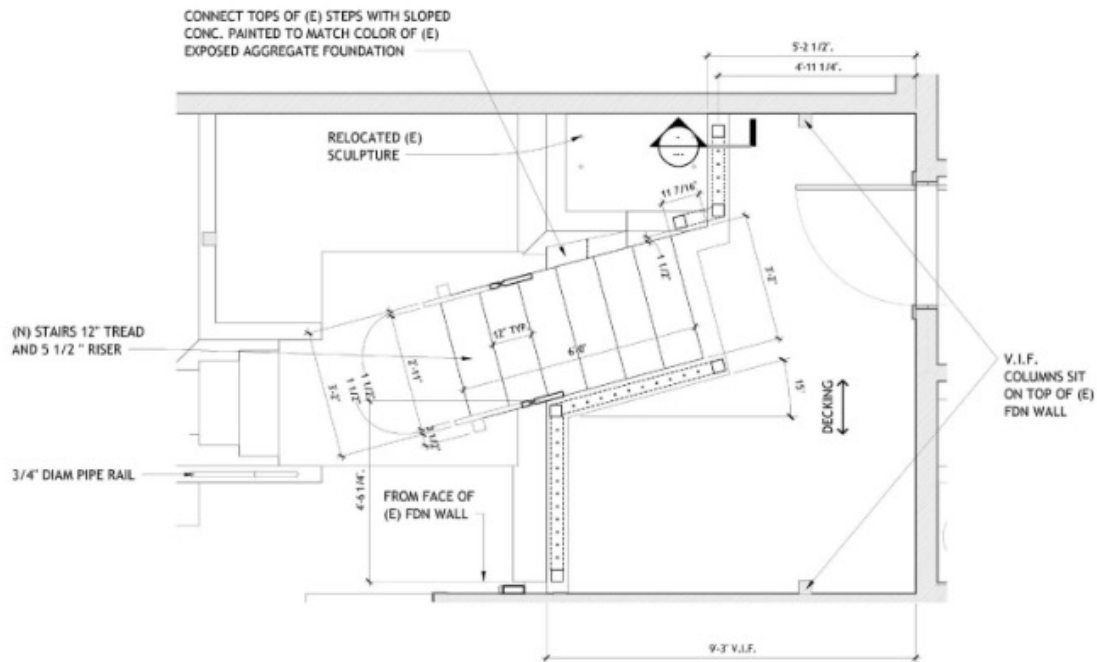
FOUNDATION AND FRAMING PLAN



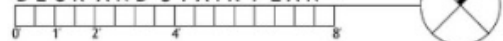
ARCHITECTURE
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BOULDER, CO 80502
TEL 303.449.6405
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(E) = EXISTING

(N) = NEW



DECK AND STAIR PLAN

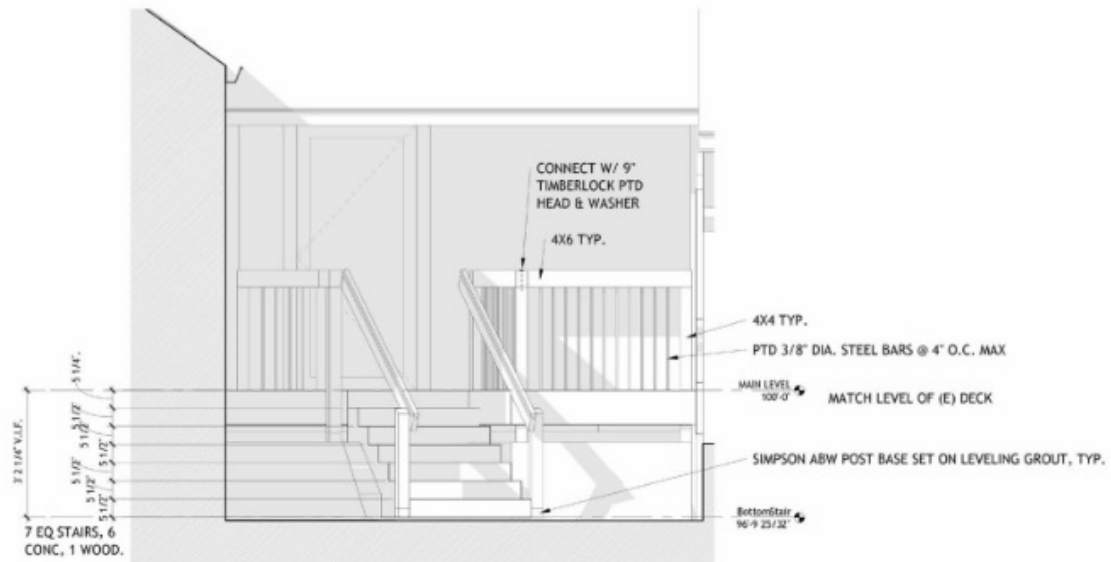




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(E) = EXISTING

(N) = NEW



BUILDING ELEVATION

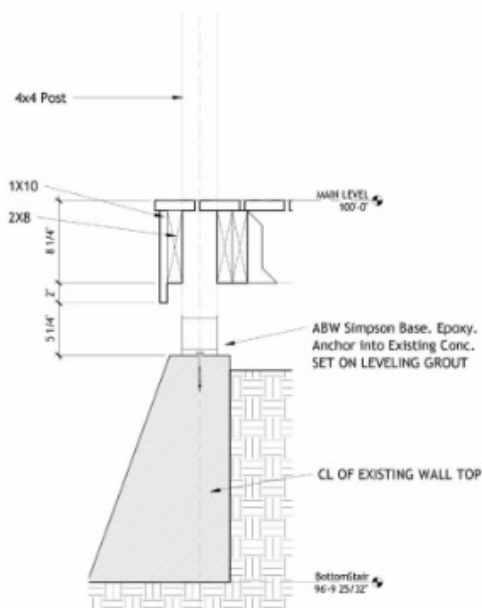
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A3.1



ARCHITECTURE
7614 PEARL STREET
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TEL 303.447.4450
ARCADEA.COM

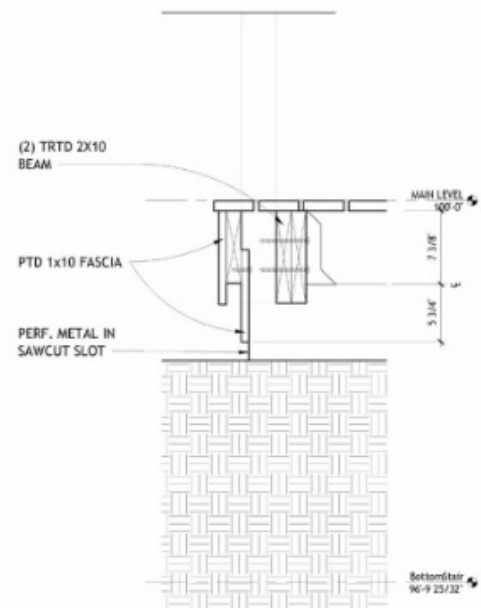
(E) = EXISTING

(N) = NEW



POST BASE SECTION

1
A3.2

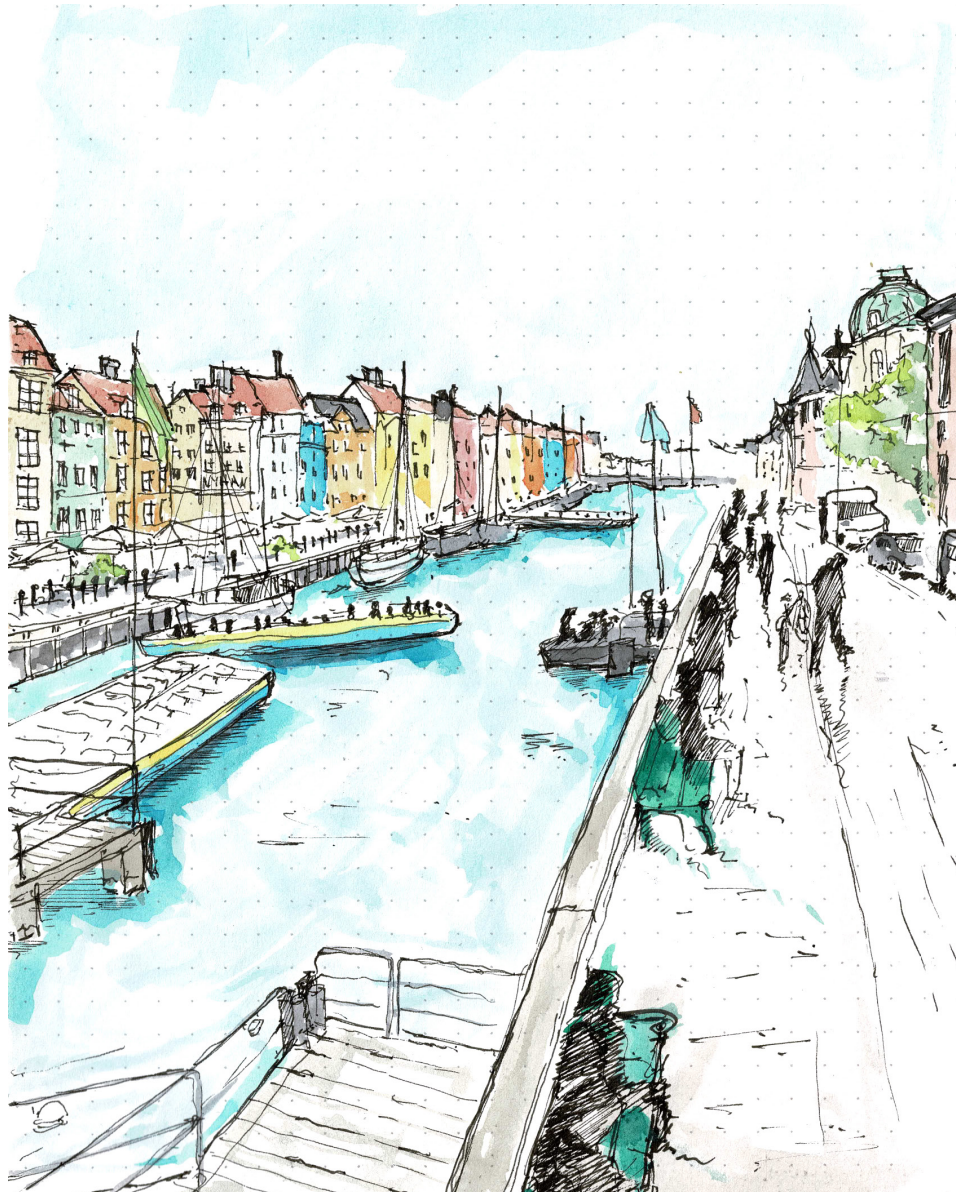


POST TO BEAM SECTION

2
A3.2

06. Additional Works | Study Abroad In Northern Europe | Watercolors

This past summer, I participated in a study abroad trip in Scandinavia. While there, I made sketches and watercolors of views and buildings that I found beautiful. I have included some of my favorite watercolors in the following section.





⑦ HELSINKI BOTANICAL GARDENS
6.4.2025

OMP



PLACE FORM

⑧ SUOMENLINNA
AUGUSTIN EHRÉN SVAR

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STOCKHOLM CATHEDRAL

04P

(12)



STOCKHOLM CITY HALL

04P

(12)

